

# Assistive Technology Tasks at Work

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# Regulations

Disabilities and work is enforced by the USA's Equal Employment Opportunity Commission

Americans with Disabilities Act (1990)

United Nations Convention on the Rights of Persons with Disabilities

Article 27: (i) Ensure that reasonable accommodation is provided to persons with disabilities in the workplace;

[http://www.un.org/disabilities/documents/convention/convention\\_accessible\\_pdf.pdf](http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf)

# Universal Design

Design for Inclusion:  
Creating a New Marketplace



National Council on Disability

October 28, 2004

# Job Accommodation Network

U.S. Department of Labor's Office of Disability Employment Policy (ODEP)

<https://askjan.org>

# EARN

Employer Assistance and Resource Network on Disability Inclusion

<http://www.askearn.org/topics/creating-an-accessible-and-welcoming-workplace/>



# Assess technology accessibility practices

<http://www.peatworks.org/action-steps>



<https://youtu.be/2M06CPbVnpU>



PEAT's mission to foster

# **COLLABORATION**

and

# **ACTION**



# At Georgia Tech



- Enabling Environments Lab
- Assistive Technology Lab
- Accessible Information and Communications Technology Lab

<http://catea.gatech.edu>



- Accessible Materials Solutions
- Assistive Technology
- Compliance, Training and Technical Support

**Honored as a Leader in Digital  
Accessibility at the United Nations**

<http://www.amacusg.org/>



# Employment access and inclusion

People with a disability are employed at a lower rate and make less money than people without a disability:

Employment levels of people with disabilities are low, and those who are employed tend to be in low-paying occupations.

There is nonetheless substantial potential for job growth among people with disabilities in well paying occupations over the coming decade.

42.8% Rate of Employment Gap

\$6,000 Income Gap

Source: <https://www.dol.gov/odep/pdf/20141022-KeyPoints.pdf>

# Can be anything!

According to the Technology-related Assistance to Individuals with Disabilities Act of 1988:

**AT device** is any item, piece of equipment, or product system whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.

**AT service** is any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device.

# AT Services

Assessment

<http://www.peatworks.org/techcheck>

Orientation and Mobility

Driver Rehabilitation

Job Coaching

Pride Industries Foundation (<http://www.prideindustriesfoundation.org/>)

# General Categories of Impairments

Gross or Fine Motor Impairments

Blind/Low Vision

Deaf/Hard of Hearing

Speech/Language Impairments

Cognitive/Neurological Impairments

# Vision/Hearing Impairments

## Blind/Low Vision

Screen magnification

Screen readers

Optical character recognition (OCR)

## Deaf/Hard of Hearing

Portable text communicators

Cell Phones

Voicemail transcription

# American Foundation for the Blind

## Computer and Internet Use

### Low Vision:

Magnification programs for the computer screen

Tips for Computer Users with Low Vision

### Low or No Vision:

Speech systems

Web Accessibility

# American Foundation for the Blind

## **Taking Notes and Writing**

Low or No Vision:

See Computer and Internet Use

Braille Systems

## **Accessing a Telephone**

Low or No Vision:

How to Get an Accessible Telephone

# Cognitive/Lingual

Cognitive impairment/Learning disability

Reading and writing support

Mathematical software

Organization software

Augmentative and Alternative Communication (AAC) devices



# Motor Impairments - Alternative input devices

Conventional Inputs:

Keyboards

Mouse

Touch-free Colors/Contrasts

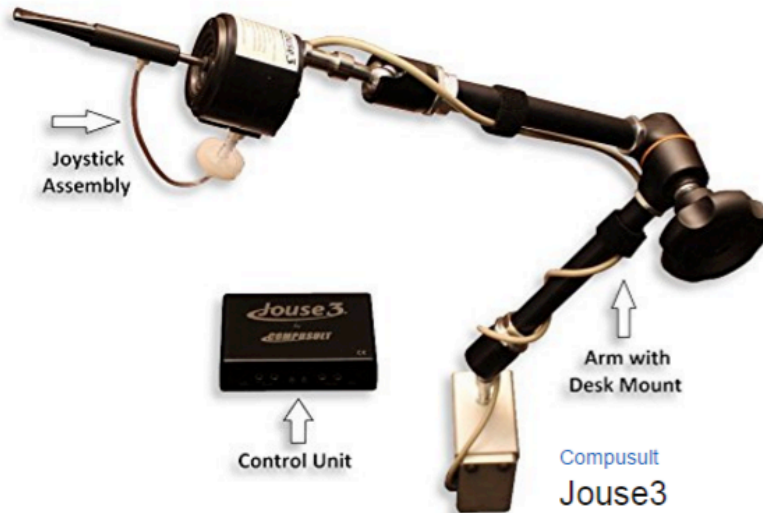
Switches

Breath and **Mouth Inputs**

Eyegaze Technology

Text to Speech / Voice Recognition

# Mouth Input



Compusult  
**Jouse3**

[Be the first to review this item](#)

**Note:** This item is only available from third-party sellers ([see all offers](#)).

**Available from these sellers.**

- An advanced USB joystick-operated Keyboard & mouse alternative for users with limited mobility
- Requires minimal movement of the joystick with your mouth, cheek, chin or tongue
- Nothing is attached to you, providing greater independence
- Extremely smooth with excellent tracking. Use the Jouse 3 for gaming, drawing or any application requiring fine cursor control
- Mounts to almost any desktop, wheelchair or bed frame and includes a two year warranty

**New** (1) from \$1,495.00 + \$55.00 shipping

# Low Tech

Workspace modifications

Accessibility adaptations

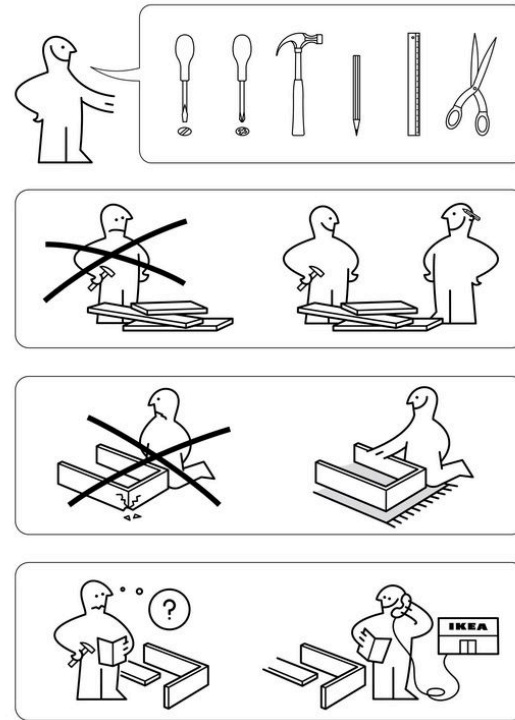
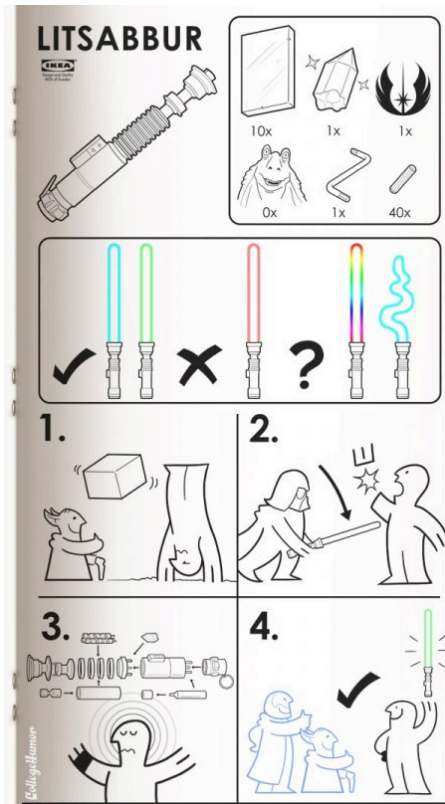
Adjustable tables

Custom designed or modified products

Tasks instructions and adaptations



# Specific instructions



## Low Tech - Low cost

Writing, gripping, typing aids

Checklist

Timers and watches

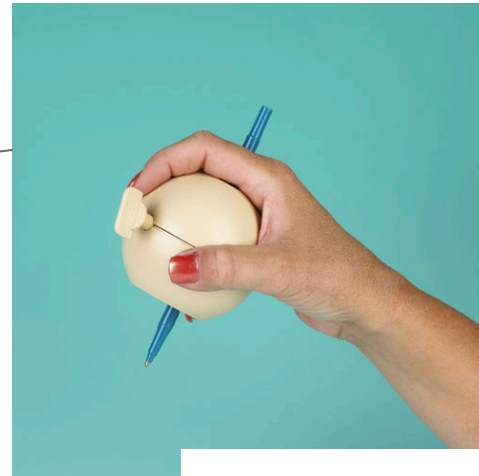
Line guide

Calendar

Locator dots

Color-coded items

Picture boards for communication



# Arthritis - Spin wheel



# Disabilities and Work, Examples of Tasks

1. Chef

2. Farmer

3. Hunter

4. Sports

# Chef



<https://easystand.com/>

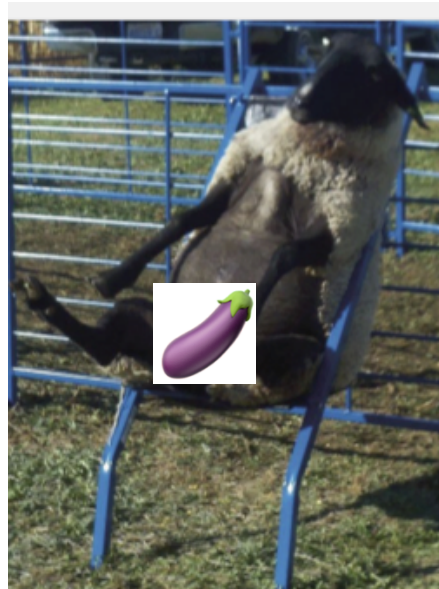


# Farmer: Maintaining animal hooves with motor and memory impairment


## Sheep/Goat Rotator!

<http://disabilityworktools.com/shop-by-enterprise/farming/sheep-goat-tilt-table/>

## Sheep Chair

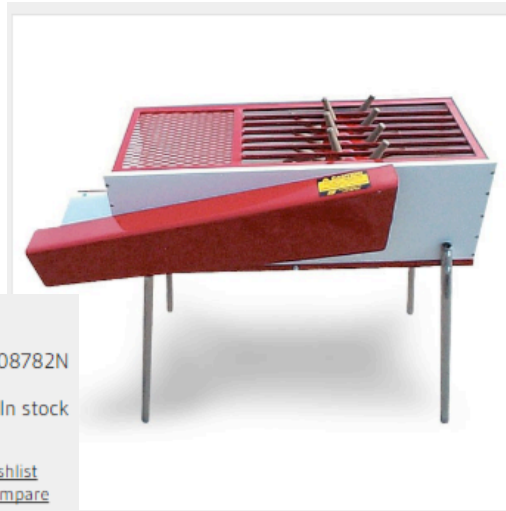


# Farmer plucking chickens with motor and memory impairment



**Small Animal Catcher**  
[Email to a Friend](#) **Sku:** KO-82  
**\$24.99** Availability: In stock  
Qty:  [ADD TO CART](#) Or [Add to Wishlist](#)  
[Add to Compare](#)

**Quick Overview**  
Small Animal Catchers help workers with arm, leg or mobility impairments to catch quickly moving animals such as pigs or pets.



**Poultry Feather Picker Plucker**  
[Email to a Friend](#) **Sku:** NZ08779N  
**\$679.99** Availability: In stock  
[GET SHIPPING](#) Or [Add to Wishlist](#)  
[Add to Compare](#)

**Quick Overview**  
Trying to remove feathers from poultry is especially difficult for those with hand, arm, shoulder, and arthritis disabilities.



**Fiberglass Chicken Dipper**  
[Email to a Friend](#) **Sku:** NZ08782N  
**\$289.99** Availability: In stock  
Qty:  [ADD TO CART](#) Or [Add to Wishlist](#)  
[Add to Compare](#)

**Quick Overview**  
For a poultry processor with poor memory, the Fiberglass Chicken Dipper automatically maintains water at the proper temperature for plucking feathers.

# Bonus

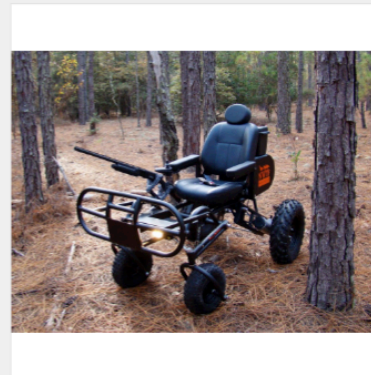
## Hunter Powered Wheelchair



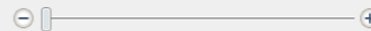
<http://disabilityworktools.com/the-hunter-powered-wheelchair/>

HOME / ALL PRODUCTS / THE HUNTER POWERED WHEELCHAIR

Tweet 0 Share 4



Double click on above image to view full picture



More Views



### The Hunter Powered Wheelchair

[Email to a Friend](#)

SKU: GE 2

\$7,495.00

Availability: In stock

GET SHIPPING

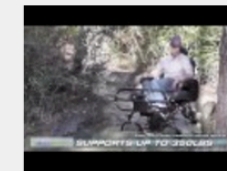
Or

[Add to Wishlist](#)  
[Add to Compare](#)

#### Quick Overview

Outdoorsmen, farmers, landscape designers and others with mobility impairments such as stroke, paralysis, amputation or multiple sclerosis can use this wheelchair to access their jobsites, quote new jobs and manage workers in the field.

#### Product Video



#### Disability use text

Hunters and outdoors people of all types will enjoy the access to the woods that the Hunter powered wheelchair offers. If you love getting outside but find yourself limited by the usual wheelchair types, this one allows access to lots of terrain.

Outdoorsmen, farmers, landscape designers and others with mobility impairments such as stroke, paralysis, amputation or multiple sclerosis can use this wheelchair to access their jobsites, quote new jobs and manage workers in the field.

**Workers with common conditions** such as these would benefit from a Hunter Powered Wheelchair: Mobility Impairment, Multiple Sclerosis (MS), Muscular Dystrophy, Neuropathy, Paraplegia, Quadriplegia, Spinal Cord Injury, Stroke, Traumatic Brain Injury (TBI).

# Assistive Tech and Olympics

South african double amputee 400m runner with running blades

Successfully fought for right to compete in the Olympics



[https://youtu.be/vB\\_g-RSIGfM?t=180](https://youtu.be/vB_g-RSIGfM?t=180)